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March 15, 2012

The Honorable Jocelyn Boyd
Chief Clerk of the Commission
Public Service Commission of South Carolina
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Complaint and Petition for Relief of BellSouth Telecommunications, LLC d/b/a
AT&T Southeast d/b/a AT&T South Carolina v. Halo Wireless, Incorporated for
Breach of the Parties' Interconnection Agreement
Docket No. 2011-304-C

Dear Ms. Boyd:

Enclosed for filing is AT&T South Carolina's Request for Entry Upon Land for
Inspection in the above-referenced matter.

By copy of this letter, I am serving all parties of record with a copy of this pleading as
indicated on the attached Certificate of Service.

Sincerely,

A handwritten signature in black ink that reads "Patrick W. Turner". The signature is written in a cursive, flowing style.

Patrick W. Turner

PWT/nml
Enclosure
cc: All Parties of Record
1027605

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA**

In Re: Complaint and Petition for Relief of)	
BellSouth Telecommunications, LLC d/b/a AT&T)	
Southeast d/b/a AT&T South Carolina v. Halo)	Docket No. 2011-304-C
Wireless, Inc. for Breach of the Parties')	
Interconnection Agreement)	

**AT&T SOUTH CAROLINA'S REQUEST FOR
ENTRY UPON LAND FOR INSPECTION**

Pursuant to Commission Regulation 103-835 and S.C.R. Civ. P. 34, BellSouth Telecommunications, Inc. d/b/a AT&T South Carolina ("AT&T South Carolina") respectfully requests that Halo Wireless, Inc. ("Halo") permit AT&T South Carolina's rebuttal witness Ray Drause and AT&T South Carolina's counsel of record entry upon the land or other property in its possession or control at or near the Halo tower site in Orangeburg, South Carolina in order to view and photograph equipment owned by or leased by Halo and/or Transcom, including without limitation:

- (a) the "wireless transmitting and receiving facilities" referenced at page 6, line 9 of the Pre-filed Rebuttal Testimony of Russ Wiseman in Docket No. 2011-304-C ("Wiseman")
- (b) the "wireless CPE" referenced at Wiseman page 6, line 12
- (c) the "wireless mobile station," "tower site" and "base station" referenced at Wiseman page 6, lines 14-16
- (d) the Transcom equipment that is said to terminate traffic and to originate a further communication at Wiseman page 8, lines 4-5
- (e) the "Transcom CPE" referenced at Wiseman page 11, line 5
- (f) the wireless equipment used by Transcom to originate calls, referenced at Wiseman page 23, lines 16-17

- (g) "Transcom's wireless CPE" and Halo's "wireless transmitting and receiving facilities" referenced at Wiseman page 23, lines 20-22
- (h) the leased wireless equipment referenced at Johnson page 33, line 6
- (i) the "equipment that Transcom leases to connect to Halo" referenced at Johnson page 34, line 14
- (j) equipment of the sort described in, or similar to the sort described in, the Surrebuttal Testimony of Raymond W. Drause on Behalf of TDS Telecom in Wisconsin Public Service Commission Docket No. 9594-TI-100, at page 4, line 1 - page 5, line 12; and page 5, line 22-page 7, line 4, or as depicted conceptually in Exhibit 3 to that testimony. (The testimony and Exhibit 3 are attached.)

The purpose of this request is to observe and identify the equipment and facilities, not to operate or handle them. AT&T South Carolina requests that such entry be granted on **Wednesday, March 21, 2012 beginning at 1:00 p.m.** unless the parties mutually agree to a different date and time.

BELLSOUTH TELECOMMUNICATIONS, LLC
d/b/a AT&T SOUTHEAST d/b/a AT&T SOUTH
CAROLINA



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ATTACHMENT

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Investigation into Practices of Halo Wireless, Inc.,)
And Transcom Enhanced Services, Inc.)

Docket No. 9594-TI-100

SURREBUTTAL TESTIMONY OF RAYMOND W. DRAUSE

ON BEHALF OF TDS TELECOM

FEBRUARY 23, 2012

1 **Q. Please state your name, title and business address.**

2 A. My name is Raymond W. Drause. I hold the position of Senior Wireless Engineer at
3 McCall-Thomas Engineering Company, Inc. I provide engineering support to various
4 independent telephone companies and electric co-operatives. My business address is
5 845 Stonewall Jackson Boulevard, Orangeburg, South Carolina.

6 **Q. Please state your experience and educational background.**

7 A. I am a Registered Professional Engineer. I graduated with honors from Herzing
8 University, in Madison, Wisconsin, with an Associate of Science in Electronics
9 Engineering Technology degree. I have worked for over 42 years in the
10 telecommunications engineering field. I have been employed by McCall-Thomas
11 Engineering Company for the past five years as Senior Wireless Engineer. My
12 experience includes the design, installation and operation of switching, transport, fiber
13 optic, wireless, video and power systems.

14 My work assignments over the past 42 years have ranged from large and well
15 established companies, such as AT&T and Southwestern Bell, cutting edge regional
16 companies in the CLEC industry such as NewSouth Communications and NuVox
17 Communications as well as telecommunications providers serving single communities.
18 My responsibilities for these assignments have ranged from detailed engineering of
19 individual telecommunications systems to the overall engineering management of entire
20 multi-state telecommunications networks. A more detailed summary of my work
21 experience is included as Ex.-TDS Telecom-Drause-1.

22 **Q. On whose behalf are you testifying?**

1 A. I am testifying on behalf of Badger Telecom, LLC, Burlington, Brighton & Wheatland
2 Telephone Company, LLC, Black Earth Telephone Company, LLC, Bonduel Telephone
3 Company, LLC, Central State Telephone Company, LLC, Dickeyville Telephone, LLC,
4 EastCoast Telecom, LLC, Farmers Telephone Company, LLC, Grantland Telecom, LLC,
5 Mid-Plains Telephone, LLC, Midway Telephone Company, LLC, Mosinee Telephone
6 Company, LLC, Mount Vernon Telephone Company, LLC, Riverside Telecom, LLC,
7 Scandinavia Telephone Company, LLC, Southeast Telephone Company of Wisconsin,
8 LLC, The State Long Distance Telephone Company, LLC, Stockbridge & Sherwood
9 Telephone Company, LLC, Tenney Telephone Company, LLC, UTELCO, LLC,
10 Waunakee Telephone Company, LLC, and TDS Metrocom, LLC, (collectively referred
11 to as "TDS Telecom" or the "TDS Telecom Companies").

12 **Q. What is the purpose of your surrebuttal testimony?**

13 A. The purpose of my surrebuttal testimony is to address portions of the direct testimony of
14 Russ Wiseman, which was filed on behalf of Halo Wireless, Inc. ("Halo") on February 8,
15 2012, and the direct testimony of Robert Johnson, which was filed on behalf of Transcom
16 Enhanced Services, Inc. ("Transcom") on February 8, 2012.

17 **Q. What materials have you reviewed in order to provide your testimony?**

18 A. I have reviewed various testimony, exhibits and transcripts as well as the Airspan
19 specification documents and technical user guides for the equipment installed at the tower
20 site in New Glarus, Wisconsin. More specifically, I reviewed the following documents:

- 21 1. Pre-filed Rebuttal Testimony of Russ Wiseman on behalf of Halo Wireless, Inc.
- 22
- 23 2. Pre-filed Rebuttal Testimony of Robert Johnson on behalf of Transcom Enhanced
- 24 Services, Inc.
- 25

3. Ex.-TDS Telecom-McCabe-5.
4. Halo Wireless, Inc., and Transcom Enhanced Services, Inc.'s 2nd Amended Responses to Staff Data Request #1, dated January 11, 2012.
5. Halo Wireless, Inc., and Transcom Enhanced Services, Inc.'s Amended Responses to Supplemental Staff Data Request #1, dated January 20, 2012.
6. January 23, 2012, Transcript of Proceedings before the Tennessee Regulatory Authority in Docket No. 11-00108 In Re: Complaint of Concord Telephone Exchange, Inc.; Humphreys County Telephone Co.; Tellico Telephone Company; Tennessee Telephone Company; Crockett Telephone Company, Inc.; Peoples Telephone Company; West Tennessee Telephone Company, Inc.; North Central Telephone Coop., Inc.; and Highland Telephone Cooperative, Inc. against Halo Wireless, LLC; Transcom Enhanced Services, Inc. and other affiliates for failure to pay terminating intrastate access charges for traffic and other relief and authority to cease termination of traffic.
7. Equipment Lease between SATNet, LLC and Halo Wireless, LLC, dated June 1, 2010.
8. Proffer of Testimony of Russ Wiseman on behalf of Halo Wireless, Inc., the Debtor in Case No. 11-42464-BTR-11, In Re: Halo Wireless, Inc., Debtor, before the United States Bankruptcy Court for the Eastern District of Texas Sherman Division.
9. Product Specification: Airspan WiMAX MiMAX-Pro V-Series.
10. HiperMAX Product Specification.
11. HiperMAX Technical User's Guide - HiperMAX Commissioning - SDR-micro.
12. HiperMAX Base Station Data Sheet.

I was aided in my interpretation of the documents by the experience I have acquired while providing engineering type work for engineering communications projects that utilize Airspan WiMAX and pre-WiMAX systems.

Q. Based on the documents that you reviewed, do you have an understanding of the equipment located at the tower site in New Glarus, Wisconsin, and the flow of Transcom and Halo traffic?

1 A. Yes. As a result of my examination of the documents, I have gained a high-level
2 understanding of the equipment used by Halo and Transcom at the tower site in New
3 Glarus, Wisconsin, as well as at the other Halo tower sites across the country. The
4 documents I reviewed provided sufficient information to permit me to create a site
5 drawing included with my testimony as Ex.-TDS Telecom-Drause-2, that conceptually
6 illustrates the significant pieces of Halo and Transcom equipment located at the tower
7 site in New Glarus, Wisconsin, as well as at the other Halo tower sites across the country.
8 The documents that I reviewed also provided information that describes how a telephone
9 call would enter a tower site and pass between the various pieces of equipment at the
10 tower site before being sent on to a Halo POP for delivery to a tandem switch. I used that
11 call-flow information to populate the site drawing (Ex.-TDS Telecom-Drause-2) with
12 lines and arrows which illustrate the manner in which a telephone call would flow
13 through the various types of equipment at the tower site. Ex.-TDS Telecom-Drause-2
14 also references equipment and systems installed at other locations that interoperate over
15 unspecified transmission facilities with the tower site equipment. The Dallas soft-switch
16 is illustrated on Ex.-TDS Telecom-Drause-2, and is an example of an important system
17 that interoperates with the tower site equipment.

18 **Q. Based on the documents you reviewed and your experience in the industry, how**
19 **would you describe the flow of a telephone call through the New Glarus site?**

20 A. The IP data stream that is carrying the telephone call enters the building at the tower site
21 and passes through unspecified equipment (labeled on Ex.-TDS Telecom-Drause-2 as
22 Switch/Router Cloud) before being sent over a CAT5 cable to Transcom's Airspan
23 MIMAX Pro-V Customer Premise Equipment. The functionality that the Airspan

1 MIMAX Pro-V provides is to take the IP data stream that is presented to it over the
2 CAT5 cable, convert it to a 3.65GHz radio signal and transmit it to Halo's Airspan SDR-
3 Micro Base Station. The function of the Airspan equipment is to simply transport the IP
4 data stream from one place to another. More specifically, from the Airspan MIMAX Pro-
5 V Customer Premise Equipment that is mounted on a pipe attached to the building near
6 the base of the tower to the Airspan SDR-Micro Single Channel RF Transceiver that is
7 mounted on the tower and then back down the tower over a fiber optic cable to the
8 Airspan SDR-Micro Base Station that is located in the building. The Airspan SDR-Micro
9 Base Station system converts the wireless IP data stream that it receives from the Airspan
10 MIMAX Pro-V Customer Premise Equipment back into a form that can be sent over a
11 CAT5 cable. From there the IP data stream is carried over a CAT5 cable to a switch
12 and/or router located in the building. The soft-switch in Dallas interacts with the switch
13 and/or router and impacts the signaling information associated with the IP data stream
14 carrying the call. From the switch or router, the IP data stream carrying the call leaves the
15 building located near the base of the tower and travels over unspecified facilities to a
16 Halo point of presence ("POP") in another city, where it may undergo a conversion from
17 IP to TDM, and is sent to a tandem switch for delivery to a subtending office where the
18 call terminates.

19 **Q. In your opinion what engineering purpose is served by the wireless connection**
20 **between the Transcom customer premises equipment and the Halo base station?**

21 **A.** The only purpose is to include a wireless transportation segment. If we review the call-
22 flow, we discover that the IP data stream carrying the call enters the CAT5 cable
23 connected to the Airspan MIMAX Pro-V Customer Premise Equipment, travels through

1 this customer premises equipment over the 3.65 GHz radio link to the Airspan Tranceiver
2 and then onto the Airspan Base Station. The call-related characteristics of the IP data
3 stream that emerges from the Airspan Base Station are unchanged from the form they
4 were in when they entered the Airspan MIMAX Pro-V Customer Premise Equipment.
5 The Airspan Customer Premises Equipment and Base Station serve no networking
6 purpose other than to carry the IP data from one point within the building to another point
7 within the building. The Airspan equipment does not contain externally controlled,
8 dynamic Ethernet switching apparatus and cannot modify the content of the IP data
9 stream to change call-related routing or signaling information that it may be carrying. It
10 appears that if the Airspan equipment were replaced by a piece of CAT5 cable, the call
11 could be completed just as it is today.

12 **Q. Would replacing the Airspan equipment with a piece of CAT5 cable have any effect**
13 **on the reliability of the network?**

14 A. Yes. By eliminating the Airspan equipment and the wireless leap from the building to the
15 tower, the resulting configuration would actually provide a more reliable level of service.
16 According to the Airspan HiperMAX Product Specification document, the predicted
17 Mean Time Between Failure of hardware in the SDR-Micro Base Station is 115,000
18 hours. This is not as reliable as the CAT5 copper wire.

19 **Q. In your opinion is the Airspan MIMAX Pro-V Customer Premise Equipment**
20 **capable of originating a call?**

21 A. No. None of the Airspan equipment, including the MIMAX Pro-V Customer Premise
22 Equipment, the Airspan SDR-Micro Single Channel RF Tranceiver, and the Airspan
23 SDR-Micro Base Station, contains externally controlled, dynamic Ethernet switching

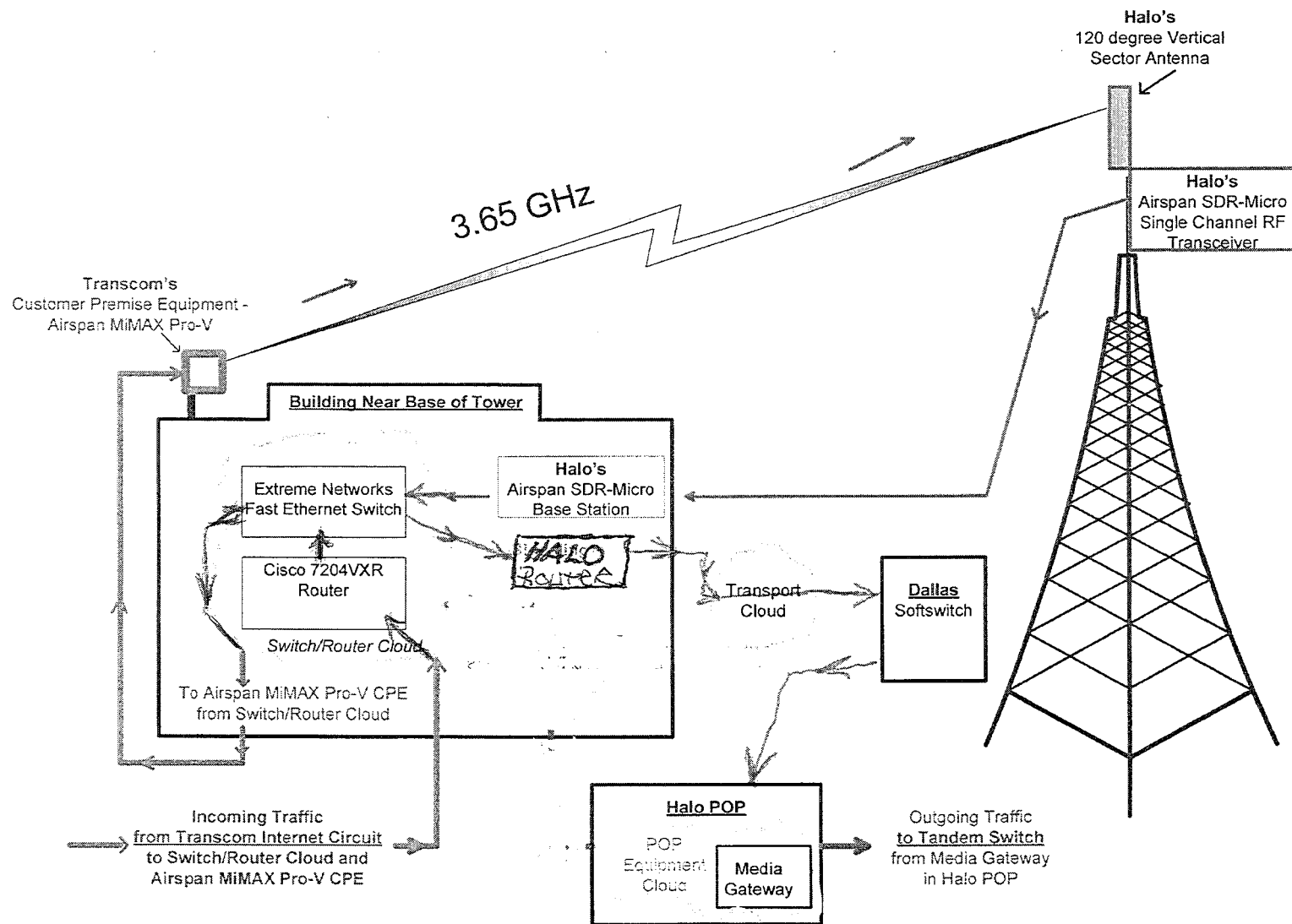
1 apparatus that might be used for call routing. In other words, all the Airspan Customer
2 Premises Equipment does is convert the IP data stream it receives into a radio signal.
3 This is unlike a wireless handset, which contains intelligence capable of creating the data
4 stream which instructs the wireless network where to send the telephone call.

5 **Q. Does this conclude your surrebuttal?**

6 **A. Yes, thank you. I reserve the right to supplement my testimony in this proceeding.**

PSC REF#:160731

Ex.-TDS Telecom-Drause-3



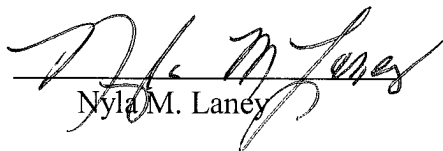
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